



GreenChill Store Certification Program Guidance

The following document provides guidance on meeting the GreenChill store certification criteria and completing either the “newly constructed store” or “operational store” application form.

Guidance on the Certification Program:

1. GreenChill certification is valid for one year from the date of the certification award.
2. GreenChill certification may be re-earned annually, as long as a store meets the certification criteria on an annual basis. A store that achieves certification for several years may receive “continued excellence” awards.
3. A store that is unable to achieve the certification criteria in a particular year will lose its certification for that year. If that store is able to meet the certification criteria in a subsequent year, it will be re-certified for that year and each of the following years that it is able to meet the criteria.
4. There is **no fee to apply** for GreenChill certification. The only cost associated with GreenChill certification is the cost to order the optional gold-level or silver-level plaque award. Every store awarded certification automatically receives a GreenChill certificate.
5. GreenChill reserves the right to verify the information submitted by a store for certification, including, but not limited to, inspection of the store, requesting third party certification, and/or requesting copies of store records related to the certification criteria.

Guidance on the Certification Application Forms:

Two application forms are available for stores applying for GreenChill certification; (1) the **‘Newly Constructed Store’ form**, and (2) the **‘Operational Store’ form**. Stores must submit the form that is appropriate to the condition of the store at the time of application. For store *remodel* projects, please contact Keilly Witman at witman.keilly@epa.gov or 202-343-9742 to determine whether the “newly constructed store” form or the “operational store” form needs to be filled out.

Guidance on Meeting the Certification Criteria:

1. GreenChill's decision to award a store with certification is based on several criteria, which are listed in the table below. Each criterion applies to and is based on different types of refrigerant-containing equipment. For instance, the refrigerant emissions rate criteria applies to and is based solely on the store's remote commercial refrigeration equipment, while the requirement that refrigerants be non-ozone-depleting applies to and is based on all three types of refrigerant-containing equipment in the store.

Equipment Included in Each Certification Criterion

CERTIFICATION CRITERIA	INCLUDED EQUIPMENT		
	Self contained commercial refrigeration equipment	Remote commercial refrigeration equipment	HVAC Equipment
Refrigerant charge (lbs.)		✓	
Evaporator heat load (1000 BTU/Hr)		✓	
Refrigerant emissions rate (lbs.)		✓	
Non-ozone-depleting refrigerant	✓	✓	✓
SNAP-approved refrigerant	✓	✓	✓
GreenChill's Installation leak Tightness standards (newly constructed stores only)		✓	

2. As indicated by the table above, all refrigerants used in the store, including the refrigerants in all types of self-contained equipment (soda machine in the break rooms, ice machines, deli refrigerators, etc.), must be non-ozone-depleting refrigerants. The most common ozone-depleting refrigerant used in supermarkets is HCFC-22. For a list of all Class I and Class II ozone-depleting refrigerants, see <http://www.epa.gov/ozone/science/ods/classone.html>
3. For the list of acceptable SNAP alternatives for retail food refrigeration see <http://www.epa.gov/ozone/snap/refrigerants/lists/foodref.html>
4. A store's refrigerant charge is the total pounds of refrigerant that are charged into a store's commercial refrigeration equipment.
5. GreenChill uses the store's **refrigerant charge** and the store's **remote commercial refrigeration evaporator heat load** to calculate the pounds of refrigerant per 1000 BTU/hr. A store's total remote commercial evaporator heat load **MAY NOT** include sub-cooling, heat of rejection, or pump heat. *Note: The evaporator heat load is not the rack rating or compressor capacity, which is typically larger than the evaporator heat load.*

Pounds of refrigerant per 1000 BTU/hr. is calculated as follows:

$$\frac{\text{Refrigerant Charge (lbs.)}}{\text{Remote commercial refrigeration evaporator heat load (1000 BTUs/hr.)}} = \text{lbs. of refrigerant per 1000 BTU/hr.}$$

6. Each store applying for GreenChill certification must **achieve an annual emissions rate of no more than 15% of the commercial refrigeration system's refrigerant charge.** The amount of refrigerant emitted over the period of one year is equal to the amount of refrigerant lost from the store's commercial refrigeration equipment and systems. The emissions rate is calculated as follows:

$$\frac{\text{Amount of refrigerant emitted over the period of one year}}{\text{System Refrigerant Charge}} \times 100 = \text{Annual emissions rate (\%)}$$

7. All newly constructed store certification applications must include verification that the commercial refrigeration system was tested for leaks according to GreenChill's Installation Leak Tightness Testing Guidelines, which are available at:

<http://www.epa.gov/ozone/partnerships/greenchill/downloads/LeakGuidelines.pdf>